

Mark Schulist

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EDUCATION

Washington University in St. Louis

BS in Computer Science

St. Louis, MO

Aug 2023 - May 2027

EXPERIENCE

Data Science Intern

SeerAI

May 2024 - Present

- Leveraged the Geodesic spatiotemporal platform via Python API and ArcGIS Online
- Wrote band arithmetic and inverse distance weighting middlewares in Go, utilizing expression parsing and K-D trees respectively

Research Assistant

California Academy of Sciences

Aug 2021 - Present

San Francisco, CA

- Developed a data pipeline to train a custom bird vocalization classifier using the [Google Perch](#) library
- Significantly improved the precision and recall of the classifier by fine-tuning the model on our own data
- Created simulations to test a Bayesian hierarchical occupancy model in R/JAGS
- Conducted avian point counts in Eldorado National Forest for the past three summers

Web Developer

California Academy of Sciences

Jun 2023 - Aug 2023

San Francisco, CA

- Created a website to teach researchers about food webs for a wildlife metrics project
- Developed the website to secure a grant extension

PROJECTS

Perch Agile Modeling | NextJS, FastAPI, SQLite, Python, Google Cloud

May 2024 - Present

- Developed a cloud-native platform to enable bioacoustics researchers to quickly train a custom classifier using transfer learning
- Utilized SQLite and approximate nearest neighbor algorithms to efficiently search audio feature embeddings

eBird Christmas Bird Count Compiler | React, Electron

December 2022 - Present

- Developed a full-stack electron application to help Christmas bird count organizers compile the data collected from eBird
- Utilized puppeteer and leaflet maps to get and display the eBird data

Winner of the Master Category at Hack WashU 2024 | NextJS, Supabase, DeckGL

Oct 2024

- Developed a website to provide a visual representation of WashU buildings, courses, and their relevant information (washucampusview.com)
- Utilized DeckGL to create a 3D map of the buildings and integrated Supabase to store the building data

Winner of the Emerging Category at Hack WashU 2023 | React, Node, Firebase, Cloud Run

Oct 2023

- Developed a website to alert WashU students when courses without waitlists have open seats
- Responsible for the backend (Firebase and Cloud Run) and part of the frontend (integrating APIs)

Winner of Hack Case Western Reserve University 2024 | NextJS, MongoDB

Feb 2024

- Developed a website to aggregate all of the events at Case Western that serve free food
- Fine-tuned a GPT model to correctly identify and rate events that serve food

Google Student Developer Club at Washington University | NextJS, MongoDB

Jan 2024 - Present

- Developed a scheduling website for the Down Syndrome Association of Greater St. Louis
- Currently Project Management Lead overseeing 5 projects designed to help the St. Louis community

TECHNICAL SKILLS

Languages: Java, Go, Python, Javascript/Typescript, HTML/CSS, R

Other Software/Tools: Git, Docker, Google Firebase, MongoDB, Supabase, Linux, MacOS, Windows

Data Analysis: Bayesian hierarchical modeling, Markov Chain Monte Carlo, Linear models, Geospatial Analyses